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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/381,828	11/24/1999	ROLF SKOLD	2964-102P	4478

7590

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EXAMINER

SODERQUIST, ARLEN

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 06/07/2002

12

Please find below and/or attached an Office communication concerning this application or proceeding.

MF=12

Office Action Summary

Application No.

09/381,828

Applicant(s)

Skold

Examiner

Arlen Soderquist

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Apr 18, 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ | 6) <input type="checkbox"/> Other: |

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

2. Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franchini in view of Martin. In the paper Franchini teaches an approach to the problem of the dependence of the dissociation constant of weak electrolytes on the temperature and on the solvent composition in the ethane-1,2-diol-2-methoxyethanol solvent system. This empirical approach to clarify the problem of the dependence of the dissociation constants of weak electrolytes on temperature and composition of mixed solvents systems (X) is applied to the dissociation constant of picric acid in ethane-1,2-diol, in 2-methoxyethanol and in their binary mixtures. The data are those of previous work (recalculated by means of the more accurate Fuoss-Hsia equation) integrated by the experimental data relative to 3 new mixtures. Two equations of the dependence of K on T and of K on X, respectively, were suggested and good accordance between experimental and calculated values are shown. Starting from the 2 above-mentioned equations, general empirical equations for the surface $K(T,x)$ are proposed; the average difference between calculated and experimental K values is ~8%. A three-dimensional plot of the function $K = K(T,X)$, figure 3) is presented. In the procedure section of page 1698, Franchini teaches that the solutions of picric acid of different concentrations were made by successive dilution of stock solutions. Franchini does not teach automated control of the dilutions.

In the abstract Martin discusses quantitation of metals in liquid samples by computer intelligent flow injection inductively coupled plasma emission spectrometry. With the advent of commercial flow-injection equipment, the means became available for the automated computer-intelligent sample handling for inductively coupled plasma (ICP) analysis. A system is described, which consists of a 36-channel ARL 34000 ICP spectrometer and a FIATron SHS-300 flow injection instrument. The functions that the system will perform include (1) automatic analysis of undiluted samples with sample introduction by flow injection, (2) automatic operator-selectable fixed dilution and analysis of samples, (3) automatic analysis of samples using computer-guided sequential dilutions to place all elements within the optimum calibration curve range, (4) the use of merging streams to achieve sample dilutions of ~200-fold, and (5) the automatic addition of standards to a sample and then sample analysis for a standard addition study. By use of the automatic sample changer, up to 76 samples of widely varying concentrations may be analyzed completely without operator intervention. Furthermore, all analyses will be made within the optimum calibration curve range for each element. Additional benefits of the flow-injection system include improved plasma stability, improved system precision and accuracy, and lower detection limits for many elements. The means by which these operations can be performed is described, and data are presented from the development and use of the system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate automated control of the successive dilutions of Franchini according to the teachings of Martin because of the flexibility of sample dilutions to include no operator intervention and addition of standards to assist in the analysis. Additionally the Courts have held that providing a mechanical or automatic means to replace manual activity which accomplishes the same result is within the skill of a routineer in the art (see *In re Venner*, 120 USPQ 192 (CCPA 1958)).

3. Applicant's arguments filed April 18, 2002 have been fully considered but they are not persuasive. Relative to the arguments applicant is directed to the claims in which the dependent property and rate of measurement are not specified in the claims. Relative to the means for

heating and cooling, the jacket of claim 8 is equivalent to the bath of the primary reference. Thus these arguments directed to these points are either not commensurate in scope with the claims or not persuasive because the claims require an element which is at least equivalent to the disclosed element. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the Courts have recognized that providing a mechanical or automatic means to replace manual activity which accomplishes the same result is within the skill of a routineer in the art. Thus even though the Franchini reference does not teach automated control of the dilutions, the Courts have held that such a modification is obvious. In looking to what type of apparatus would be capable of performing the automated dilutions, one of skill would have consulted with the Martin reference because it is clearly preparing samples for analysis through dilution. In consulting with the reference it would have been clear that automation of the dilution would have lead to many expected improvements which would have added additional motivation to the fact that the Courts have held such an automation to be obvious. The fact that applicant may have recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited art relates to automated dilutions and studying liquids or mixtures using graphoanalytical methods.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arlen Soderquist whose telephone number is (703) 308-3989. The examiner's schedule is variable between the hours of about 5:30 AM to about 5:00 PM on Monday through Thursday and alternate Fridays.

For communication by fax to the organization where this application or proceeding is assigned, (703) 305-7719 may be used for official, unofficial or draft papers. When using this number a call to alert the examiner would be appreciated. Numbers for faxing official papers are 703-872-9310 (before finals), 703-872-9311 (after-final), 703-305-7718, 703-305-5408 and 703-305-5433. The above fax numbers will generally allow the papers to be forwarded to the examiner in a timely manner.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



June 5, 2002

**ARLEN SODERQUIST
PRIMARY EXAMINER**